

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-26. (canceled)

27. (new) A visiting plan generation method of generating a visiting plan for a plurality of groups to visit a plurality of destinations on a task-sharing basis, comprising the steps of:

inputting information on destinations, information on members constructing a group, and information on said groups necessary for visiting plan generation, said information on said destinations comprising information on locations of said destinations, and conditions of tasks to be performed;

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re-arranging the members of the group and visiting plan to an optimum state based on the state X showing visiting plans of each group, the members of said each group and information on destination assignment to each group at a predetermined point of time;

re-forming the visiting plan by calculating a visiting plan cost $F_i(X_i)$ for each group based on information on the members belonging to group i and information on destination assignment to each group received from said re-

arranging step, and information on destinations and members received at the information inputting step, and then re-forming a visiting plan Ξ_i for each group based on the visiting plan cost $F_i(\Xi_i)$ for each group and the information received at the information inputting step; and

in the visiting plan re-arranging step, the members of the group and visiting plan thereof are re-arranged to an optimum state, using the visiting plan Ξ_i of the group i under the state X and the visiting plan cost $F_i(\Xi_i)$ thereof.

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28. (new) A visiting plan generation method as claimed in claim 27, wherein the visiting plan re-arranging step comprises at least one of the following steps of:

newly assigning an unassigned destination to a group based on a state X ;

re-assigning an already assigned destination based on a state X ;

re-arranging groups based on a state X .

29. (new) A visiting plan generation method as claimed in claim 27, wherein the information on a member constructing a group contains a mobile capability of said member and a working capability thereof.

30. (new) A visiting plan generation method as claimed in claim 27, wherein the information on a group

contains the members constructing a group and constraints comprising relationships among the members of the group.

31. (new) A visiting plan generation method as claimed in claim 27, wherein the information on a group contains information that said group is an invariable-member group in which the members of the group cannot be re-arranged, or said group is a variable-member group in which the members of the group can be re-arranged.

32. (new) A visiting plan generation method as claimed in claim 27, wherein in the visiting plan re-arranging step, total time spent in moving and total time spent in working are calculated as the visiting cost $F_i(X_i)$ of each group.

33. (new) A visiting plan generation method as claimed in claim 27, wherein in the state re-arranging step, members of the group and visiting plan thereof are re-arranged to an optimum state, in which a state cost function $F(X)$ giving a maximum value of the cost among the groups is minimized by using the visiting plan X_i of the group i under the state X and the visiting plan cost $F_i(X_i)$ thereof.

34. (new) A visiting plan generation method as claimed in claim 27, wherein in the state re-arranging step,

members of the group and visiting plan thereof are re-arranged to an optimum state, in which a state cost function $F(X)$ giving an average value of the cost among the groups is minimized by using the visiting plan X_i of the group i under the state X and the visiting plan cost $F_i(X_i)$ thereof.

35. (new) A visiting plan generation method as claimed in claim 30, wherein the group constraints contain a maximum number of the members which can belong to the group.

36. (new) A visiting plan generation system for generating a visiting plan for a plurality of groups to visit a plurality of destinations on a task-sharing basis, comprising:

input means for receiving information on destinations, information on members constructing a group, and information on said groups necessary for visiting plan generation, said information on said destinations comprising locations of said destinations, and conditions of tasks to be performed;

state memory means for memorizing a state X showing visiting plans of each group, the members of said each group and information on destination assignment to each group at a predetermined point of time, and an optimum state in preceding visiting plan conditions;

state re-arrangement means for re-arranging the members of the group and visiting plan to an optimum state based on the state X memorized in said state memory means;

plan re-formation means which calculates a visiting plan cost $F_i(X_i)$ for each group based on information on the members belonging to group i and information on destination assignment to each group received from the state re-arrangement means and information on destinations and members received from the input means, and reforms a visiting plan X_i for each group based on the visiting plan cost $F_i(X_i)$ for each group and the information received at the input means,

wherein said state re-arrangement means re-arranges members of the group and visiting plan thereof to an optimum state, using the visiting plan X_i of the group i under state X and the visiting plan cost $F_i(X_i)$ thereof.

37. (new) A visiting plan generation system as claimed in claim 36, wherein the state re-arrangement means comprises:

new-assignment means for newly assigning an unassigned destination to a group based on a state X memorized in the state memory means;

re-assignment means for re-assigning an already assigned destination based on a state X memorized in the state memory means;

group re-arrangement means for re-arranging groups based on a state X memorized in the state memory means.

38. (new) A visiting plan generation system as claimed in claim 36, wherein the information on a member constructing a group contains a mobile capability of said member and a working capability thereof.

39. (new) A visiting plan generation system as claimed in claim 36, wherein the information on a group contains the members constructing a group and constraints comprising relationships among the members of the group.

40. (new) A visiting plan generation system as claimed in claim 36, wherein the information on a group contains information that said group is an invariable-member group in which the members of the group cannot be re-arranged, or said group is a variable-member group in which the members of the group can be re-arranged.

41. (new) A visiting plan generation system as claimed in claim 36, wherein the plan re-formation means calculates total time spent in moving and total time spent in working as the visiting plan cost $F_i(X_i)$ of each group.

42. (new) A visiting plan generation system as claimed in claim 36, wherein the state re-arrangement means

re-arranges members of the group and visiting plan thereof to an optimum state, in which a state cost function $F(X)$ giving maximum value of the cost among the groups is minimized by using the visiting plan X_i of the group i under the state X and the visiting plan cost $F_i(X_i)$ thereof.

43. (new) A visiting plan generation system as claimed in claim 36, wherein the state re-arrangement means re-arranges members of the group and visiting plan thereof to an optimum state, in which a state cost function $F(X)$ giving average value of the cost among the groups is minimized by using the visiting plan X_i of the group i under the state X and the visiting plan cost $F_i(X_i)$ thereof.

44. (new) A visiting plan generation system as claimed in claim 39, wherein the group constraints contains a maximum number of the members which can belong to the group.
